

Over-expanded Nozzle - Geometry

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Geometry

As said before, the geometry was inspired on the work of Balasubramanyam Sasanapuri, Manish Kumar & Sutikno Wirogo (ANSYS Inc.) called "Simulation of flow through Supersonic Cruise Nozzle: A validation study".

The geometry is a simple 2D sketch of half of the supersonic nozzle. Since this is a fluid flow problem, you don't create the geometry of the nozzle itself, rather you subtract that geometry from a domain. In this case, the domain is about 10 time larger than the nozzle.

To save efforts, the workbench file containing the geometry and the mesh will be provided in the next section.

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